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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,000	07/09/2001	Teruo Kamada	SHM/12585	6853
40854	7590	04/01/2004	EXAMINER	
RANKIN, HILL, PORTER & CLARK LLP 4080 ERIE STREET WILLOUGHBY, OH 44094-7836				FISCHMANN, BRYAN R
ART UNIT		PAPER NUMBER		
3618				

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/901,000	KAMADA ET AL.
Examiner	Art Unit	
Bryan Fischmann	3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 06 February 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-3 and 9-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3 and 9-29 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 09 July 2001 is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 02-06-04.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

Acknowledgments

1. The Amendment dated 2-06-2004 has been entered.

Election/Restriction

2. As noted on previous Office Actions, non-originally submitted claims 11 and 16-18 are drawn to a species that was not originally presented. Therefore, as noted on previous Office Actions, these claims remain withdrawn from consideration. See 37 CFR 1.142(b) and MPEP § 821.03.

Similarly, newly added claims 25 and 27 are also withdrawn, as not being drawn to a species originally presented.

These claims will remain withdrawn, until they depend from an allowable independent claim, or are canceled.

3. An action on the merits of the originally presented invention, claims 1-3, 9, 10, 12-15, 19-24 and 26, 28 and 29 follows.

Specification

4. The substitute specification is objected to due to the minor informalities:
 - A) The recitation of "...which is called as a backing plate..." in the latter portion of paragraph 0003 is objected to, as being awkwardly worded.

Wording is believed improved if the word "as" were deleted from the above recited phrase.

- B) The first three lines of paragraph 0006 are considered awkwardly worded.

5. The amendment at the top of this Office Action has amended paragraph 0062 to recites "... such that Z1=Z2 is satisfied".

This recited phrase is objected to due to the following:

The Examiner cannot find support for this recitation in the original disclosure, and therefore, this recitation is considered new matter.

Per Section 2163.06 of the MPEP, new matter in the specification should be objected to under 35 USC 132 or 251 and the Applicant is required to cancel the new matter unless he can cite specific support in the originally filed application for the "new matter".

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention

7. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Claim 9, which was not an originally filed claim, recites "...wherein the aperture is designed so as to make a section modulus of the backing plate equal to a section modulus of the blank material...".

The Examiner cannot find support in the original claims or disclosure for this recitation and it is therefore considered new matter. Per Section 2163.06 of the MPEP, new matter in the claims should be rejected under 35 USC 112 first paragraph, written description requirement.

Although Applicant has disclosed in paragraphs 0062 and 0063 a thickness, or "height" of the backing plate both less, equal and greater than the height of the blank, there is no disclosure that this range of heights and hole diameters for the holes in the bending line of the backing plate is such that the section modulus of the backing plate and blank are equal.

Note that this rejection will be withdrawn if the Applicant can specifically identify support in the original disclosure for the above claim.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3, 10, 12-15, 19-24, 26, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prior Art Figures 19A and 19B and associated Background portion of the Instant Application related to these Figures, in view of British Patent 2197810.

Prior art Figures 19A and 19B and associated Background portion of the Instant Application related to these figures teaches a vehicular part comprising a blank material (201) formed from a sheet metal (paragraph 0004 of the Instant Application) and having a bent portion (204 and 205); and

a backing plate (202) joined with the blank material (Figures 19A and 19B) and having a bent portion (204 and 205) corresponding in position to, and bent along a same bending line as the bent portion of the blank material.

Prior art Figures 19A and 19B and associated Background portion of the Instant Application related to these Figures fails to teach the backing plate has at least one aperture formed at the bent portion and located on the bending line.

However, British Patent 2197810 teaches that a row of holes placed along a bend line facilitates bending (third paragraph of page 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a row of holes along the bending line of the bent portion of the backing plate of Prior Art Figures 19A and 19B, as taught by British Patent 2197810.

Although it is noted that British Patent 2197810 teaches that these holes are to facilitate hand bending, it is noted that claim 1 is an apparatus claim and the method of forming the apparatus is not considered germane to the apparatus claimed. Note that Section 2113 of the MPEP recites "The patentability of a product does not depend on its method of production". Note that the apparatus of claim 1 may be formed by hand

bending, as well as by machine bending, and the presence of a hole on the bend line will also facilitate machine bending.

Regarding claims 2 and 3, see Prior Art Figures 19A and 19B and paragraph 0005 of the Instant Application.

Regarding claims 10 and 23, note that British Patent 2197810 teaches plural apertures formed on the bending line on page 1.

Regarding claims 13, 14 and 26, note that it is considered within the skill level of one of ordinary skill in the art to change the shape of an object. See Section 2144.04 of the MPEP. Changing the shape of an aperture from round to oblong or elongated rectangular shape is advantageous in that the oblong or elongated rectangular aperture provides a larger area of reduced moment of inertia further facilitating the bending of the backing plate along the bending line. Also, providing for larger “transition” areas, as in the case of an “oblong shape” as recited in claim 13, between that portion of the backing plate with reduced area moment of inertia (due to apertures) and with the “full” moment of inertia (no apertures) is also advantageous in that unwanted stress concentrations are reduced over that which would be present with only a round aperture only, due to the larger “transition area”. Unwanted stress concentrations are disadvantageous in that they facilitate fatigue failure and corrosion.

Regarding claims 15 and 26, again note that it is within the skill level of one of ordinary skill in the art to change the shape of an object for reasons noted above. Note that an “irregularly” shaped aperture is advantageous in that a larger irregularly shaped object facilitates bending of the backing plate and reduces stress concentrations over a

smaller round hole as discussed above. An irregularly shaped aperture may also be advantageous in that the irregularly shaped aperture may be made by a punch instead of making a round hole utilizing a drill. The use of a punch is generally less time consuming than a drill.

Note also that per Section 2129 of the MPEP, admitted prior art is available against the claims.

Regarding the recitation of "...wherein the backing plate bent portion and the blank portion are in intimate contact with one another" in claim 19, note the following:

Although not specifically taught by Prior Art Figures 19A and 19B, or British Patent 2197810, the combination "vehicular part" of Prior Art Figures 19A and 19B and British Patent 2197810 will allow "intimate contact" with the backing plate bent portion and the blank portion", as the reduced section modulus of the backing plate for a section of the backing plate that contains the holes will not allow "springback" of the backing plate from the blank portion, in the same manner that the reduced section modulus of the backing plate for a section trough a hole in the backing plate of Applicant's invention will not allow "springback" of the backing plate from the blank portion of Applicant's invention. Note also that parts are either "in contact", or "not in contact". Due to this, the words "contact" and "intimate contact" are understood to be synonymous.

Regarding claims 22, 24, 28 and 29, note that it is considered within the skill level of one of ordinary skill in the art to select and optimum value, or range of values within the prior art general conditions. See *In re Aller et al* 105 USPQ 133.

10. Claims 1-3, 10, 12-15 and 19-24, 26, 28 and 29 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Prior Art Figures 19A and 19B and associated Background portion of the Instant Application related to these Figures, in view of Japanese Patent 59-202119.

Prior art Figures 19A and 19B and associated Background portion of the Instant Application related to these figures teaches a vehicular part comprising a blank material (201) formed from a sheet metal (paragraph 0004 of the Instant Application) and having a bent portion (204 and 205); and

a backing plate (202) joined with the blank material (Figures 19A and 19B) and having a bent portion (204 and 205) corresponding in position to, and bent along a same bending line as the bent portion of the blank material.

Prior art Figures 19A and 19B and associated Background portion of the Instant Application related to these Figures fails to teach the backing plate has at least one aperture formed at the bent portion and located on the bending line.

However, Japanese Patent 59-202119 teaches the use of an aperture (3) along a bend line facilitates bending (English Language Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a row of holes along the bending line of the bent portion of the backing plate of Prior Art Figures 19A and 19B, as taught by Japanese Patent 59-202119.

Regarding claims 10 and 23, note that per Section 2144.04 of the MPEP, it is within the skill level of one of ordinary skill in the art to duplicate parts. Duplicating the

hole (3) along the bending line is advantageous in that additional holes, especially in wider parts, further facilitates bending.

Regarding claim 12, see Figure 2 of Japanese Patent 59-202119.

Regarding claim 13 and 26, see Figure 3 of Japanese Patent 59-202119 and comments below.

Regarding claims 14 and 26, note that it is considered within the skill level of one of ordinary skill in the art to change the shape of an object. See Section 2144.04 of the MPEP. Changing the shape of a hole from round to an elongated rectangular shape is advantageous in that the elongated rectangular aperture provides a larger area of reduced moment of inertia further facilitating the bending of the backing plate along the bending line. A rectangular aperture may also be advantageous in that the rectangular-shaped aperture may be made by a punch instead of making a round hole utilizing a drill. The use of a punch is generally less time consuming than a drill.

Regarding claims 15 and 26, again note that it is within the skill level of one of ordinary skill in the art to change the shape of an object for reasons noted above. Note that an "irregularly" shaped aperture is advantageous in that a larger irregularly shaped object facilitates bending of the backing plate and reduces stress concentrations over a smaller round hole as discussed above. An irregularly shaped aperture may also be advantageous in that the irregularly shaped aperture may be made by a punch instead of making a round hole utilizing a drill. The use of a punch is generally less time consuming than a drill.

Note also that per Section 2129 of the MPEP, admitted prior art is available against the claims.

Regarding the recitation of "...wherein the backing plate bent portion and the blank portion are in intimate contact with one another" in claim 19, see the comments for claim 19 in the previous 103 rejection that utilized British Patent 2197810 as the secondary reference.

Regarding claims 22, 24, 28 and 29, note that it is considered within the skill level of one of ordinary skill in the art to select and optimum value, or range of values within the prior art general conditions. See *In re Aller et al* 105 USPQ 133.

Response to Applicant's Remarks and Examiner's Comments

11. The amendment cited at the top of this Office Action has overcome the specification objection made in the last Office Action.
12. Regarding the traversal of the 112 1st paragraph rejection of claim 9 made in the last Office Action, the following arguments are set forth against the rejection:
 - 1) Applicant recites on page 9 of the "Remarks" section of the above amendment "...the subject matter of claim 9, namely that the 'aperture is designed so as to make a section modulus of the backing plate equal to a section modulus of the blank material'...it is clearly stated that the number and size of the apertures in the backing plate are determined and machined so as to have the backing plate meet the characteristics of the blank sheet...".

Examiner's Response – The Examiner cannot locate the above recitation in the original disclosure. Therefore, it is requested the Applicant specifically identify the page and line numbers of the original disclosure that the Applicant believes provides adequate written description for claim 9. However, even if this recitation can be located, it is not clear that the term "characteristic" is equivalent to the term "section modulus". It would depend upon how the two terms are used in context, or if there has been "equivalency" between these two terms established in the specification. The closest support the Examiner can find for claim 9 is that line 22 of page 13 of the original disclosure teaches that h_1 may be equal to h_2 . However, since the formulas given for the section modulus of the backing plate and blank material on line 25 of page 12 and lines 5 and 6 of page 13 are not the same, due to the presence of the holes in the backing plate, it does not follow that the section modulus of the backing plate and blank portion are the same.

2) Applicant recites on page 9 of the "Remarks" section of the above amendment "...With regard to the Examiner's comments provided on page 4 of the Office action...it is believed that the Examiner has misinterpreted the disclosure...the Substitute Specification...refers to Figure 6...".

Examiner's Response – It is noted that page 4 of the last Office Action that the width "b" of the blank portion was understood to be the entire width of the hood. However, upon examination of Figure 6, which defines the width of b_1 and b_2 , it is noted that the widths of b_1 and b_2 are understood to be equal, although Figure 6 appears to show b_2 slightly wider than b_1 . Due to this, the portions of the 112 1st

rejection that assume that the width of the blank portion is the entire width of the hood have not been repeated in this Office Action.

13. Regarding the traversal of the 103 rejection of claims as being unpatentable over Prior Art Figures 19A and 19B and associated Background portion of the Instant Application related to these Figures, in view of British Patent 2197810, and a second 103 rejection utilizing the same primary reference, in view of Japanese Patent 59-202119, the Applicant recites the following in the "Remarks" section of the amendment cited at the top of this Office Action:

(1) Applicant's Remark – On page 11, the Applicant recites "The '810 patent also indicates, in the 'Background' section, of the undesirable practice of forming holes along the fold line of the metal blank..." .

Examiner's Response – The Examiner notes that British Patent '119 teaches that it is known to place apertures on a bend line to facilitate bending on page 1. The Examiner also notes that British Patent '119 offers the opinion that the holes give a "somewhat unsightly result". However, what may be considered an "unsightly result" by the author of British Patent '801 may not be considered unsightly by another. Also, what is considered "unsightly" is largely dependant upon the application. British Patent '801 discusses making bends in cabinets. While holes in a bend in a cabinet, say along the "outer periphery" would likely be considered "unsightly", since this is a piece of furniture, holes in a bend line of a backing plate of a hood of an automobile would not likely be considered unsightly. If Applicant thought this was the case, it is unlikely that Applicant would have proposed the Instant Invention.

(2) Applicant's Remark – On page 12, the Applicant recites "...it is noted that while the problems are encountered by the prior and the present invention are not relevant when addressing a novelty rejection under Section 102, they are highly relevant when assessing a rejection based on obviousness. Neither the '810 patent nor the '119 patent is concerned with the problems encountered and solved by the present invention – how to form two parts in a single forming operation wherein the parts have different physical characteristics'...".

Examiner's Response – Per Section 2141 of the MPEP, obviousness, "103 rejections" are set forth using the Graham factual inquiries to determine novelty of an invention. However, the "invention" is the "claimed invention". See Section 2141 of the MPEP. The "claimed invention" does not set forth that two parts are formed in a single operation as argued by Applicant above. Rather, the claimed invention is only an apparatus claim for a vehicular part comprising a blank material and a backing plate joined to the blank material. It is the Examiner's opinion that were the Graham factual inquiries set forth on the prior cited art that sets forth the 103 rejection in this and the previous office actions, that one of ordinary skill in the art would consider the claimed invention obvious for reasons set forth in this Office Action.

(3) Applicant's Remark – On pages 12 and 13 the Applicant recites "...the '801 and '119 patents are directed toward solving problems that are not relevant to the present invention – how to manually bend a metal part... In this regard it is noted that the present invention uses an automated hydraulic press...while the cited patents presumably employ a hand-bending operation...".

Examiner's Response – Note that claim 1 is an apparatus claim. Note that Section 2113 of the MPEP recites “the patentability of a product does not depend on its method of production”. Section 2173.05(p) of the MPEP also recites “A claim to a device, apparatus, manufacture, or composition of matter may contain a reference to the process in which it is intended to be used without being objectionable...so long as it is clear that the claim is directed to the product and not the process”. From this, the method of how the bend is formed is not considered germane, since the claim is directed to an apparatus. Also, note that there is no recitation in the claim as to how the bend is formed.

(4) Applicant's Remark – On page 13 the Applicant recites “...Despite the Examiner's assertions to the contrary, the cited art is directed toward forming a 'blank' – not toward forming of a 'backing plate'... Therefore, even if the AAPA were combined with the '801 and/or '119 patents, the resulting combination would necessarily be a solid backing plate secured to a blank sheet, where the blank sheet would have an aperture...”.

Examiner's Response – The Applicant's Admission of Prior art teaches a backing plate that is required to be bent, as well as an “inner skin of a hood”. British Patent 2197810 provides a teaching of utilizing a row of holes to bend a metal plate. Japanese Patent 59-202119 provides a teaching of utilizing a hole to facilitate providing a bend in a metal sheet. From this, one skilled in the art would likely conclude that providing holes on the bend line of the backing plate, the “inner skin” of the hood, or both would facilitate bending. Note that providing a hole in a bend line of a backing plate is one of

the above choices. Note also that since Applicant uses the word "comprising" in the preamble of claim 1, that one of the above choices that would utilize holes in both the inner skin and the backing plate bend lines would appear to "read" on claim 1. Note that the Applicant has not required there be no holes in the blank material bend line, while there are holes in the backing material bend line.

Conclusion

14. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bryan Fischmann whose telephone number is (703)

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306-5955. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

If attempts to reach the Examiner by telephone are unsuccessful, the examiner's supervisor, Brian Johnson, can be reached on (703) 308-0885. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.


3-26-4
BRYAN FISCHMANN
PATENT EXAMINER